

# **LYNDON B. JOHNSON NATIONAL HISTORICAL PARK**

South-Central Texas Hill Country

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## **INTRODUCTION TO THE SITE AS A CULTURAL LANDSCAPE: RECOGNIZING CULTURAL AND NATURAL RESOURCE VALUES**

Lyndon B. Johnson National Historical Park lies in the Hill Country of south-central Texas along the Pedernales River. The park's 674 acres are divided into two separate districts, the LBJ Ranch district and the Johnson City district. Both districts are cultural landscapes because of their association with the life of Lyndon B. Johnson, thirty-sixth president of the United States, and both contain historic structures in their original locations that are listed on the National Register of Historic Places.

President Johnson was born, lived, died, and is buried on the LBJ Ranch. Within the ranch district are his reconstructed birthplace, the Junction School, his grandparents' home, the "Texas White House," the show barn and ranch lands, and the family cemetery where the president is buried. In general, the park has used the time period from 1960 to 1973 for structure reconstruction. This time frame encompasses Johnson's vice presidency and presidency plus the five-year period of retirement prior to his death.

Although Johnson's boyhood home has had various occupants over the years, it has been restored by the National Park Service to his boyhood period, the 1920s. Structures in the Johnson settlement area of the Johnson City district date from approximately 1855–1885. Each is maintained and interpreted as it would have existed during the time of its greatest significance.

The Texas Hill Country was important to President Johnson because he felt the influence of its landscape and people in his own life, and the landscape's power of rejuvenation in difficult times. It is a natural landscape of forested hills, deep canyons, and secluded valleys, with live oak–juniper savanna in the uplands and wild pecan trees along the river bottoms.

## **BACKGROUND**

The Edwards Plateau where the national park is located was first inhabited by the Tonkawa and later the Comanche people. The soils in this area made the land suitable for agriculture and began to attract European American settlers in the 1840s. The ancestors of Lyndon B. Johnson followed shortly afterward. Rounding up unbranded, free-ranging

longhorn cattle that had been introduced to the region by Spanish explorers allowed individuals, including Lyndon B. Johnson's grandfather, to establish their fortunes in the Texas cattle business. Cattle drives were a part of that business in the 1860s and 1870s, but this period in the region's history came to a close by the end of the 1880s when the open range was fenced with barbed wire, and improved breeds of cattle and new varieties of pasture grass introduced. Agriculture is still important today, but the beauty of the Hill Country attracts tourists and recreational users as well, and many ranchers lease their land for sport hunting.

Johnson's birthplace and boyhood home in Johnson City became a national historic site in 1969. The LBJ Ranch district, which includes the "Texas White House," was donated to the National Park Service in 1972 with the request by President Johnson that it "remain a working ranch and not become a sterile relic of the past." The national historical park is honoring President Johnson's request by continuing to operate a cattle ranch using the best modern scientific methods available. The park raises and maintains a herd of Hereford cattle that are of the same genetic strain as those raised by the president. Park staff have also worked with Texas A&M University and the National Park Service (NPS) Santa Fe Support Office to design and implement an integrated pest management (IPM) program that greatly reduces the use of chemical fertilizers, pesticides, and herbicides in comparison to the 1950s and 1960s.

The park is working with neighboring property owners to create viewshed easements that preserve the rural character of the land. Because an important part of the interpretive story for the national park is the period of the cattle drives, the park has begun a program of prescribed burns in some areas to remove nonnative vegetation and return the landscape to its presettlement appearance.

The national park operates in association with the Lyndon B. Johnson State Historical Park to provide opportunities for visitors to experience the local and regional context that shaped the policies and programs of the last frontier president's administration.

## **THE ISSUE**

Because President Johnson deeded land to the National Park Service with the specific request that the ranch continue to be a "working ranch," resource management and maintenance staff have had to develop a management program that will allow the continued production of a saleable pecan crop each year while protecting the park's natural resources. Working with several partners, the park has developed a successful IPM program and water quality monitoring regime to meet both goals. The park is currently in the midst of thinning the historic pecan orchard to reduce the risk of pests and improve pecan production while still maintaining the orchard's historic appearance.

## **METHOD: ORCHARD MANAGEMENT**

### **Integrated Pest Management Program**

One important feature of the park's landscape is a 35-acre pecan orchard. Its canopy provides shade and comfort on hot summer days. The orchard also acts as a buffer between agricultural fields, the historic Johnson farm area, and the LBJ Ranch house. It is believed to have been planted in the 1930s and is now composed of five or six varieties of trees, some historic and others developed more recently. During the 1950s and 1960s, the orchard was managed with a multitude of agrochemicals, the accepted practice of the day. When the National Park Service assumed management of the property, the use of pesticides and herbicides was no longer acceptable, and an intensive integrated pest management program was developed working with IPM specialists from Texas A&M University and the NPS Santa Fe Support Office for the Intermountain Region. The IPM program at Lyndon B. Johnson National Historical Park was started in the late 1970s and was one of the first serious IPM programs in the country within the national park system. Although the park's orchard is managed for saleable and sustainable crop production, park managers determined that minimizing the use of pesticides and their effects on non-target organisms was more important than maximizing profitability.

Every wild pecan tree is genetically distinct from its neighbors, which provides considerable protection from pathogens. Orchard trees, on the other hand, are propagated vegetatively, creating many genetically uniform trees that are highly susceptible to epidemics of pecan scab. The park's relatively dry environment limits vulnerability to this fungus to times of rapid leaf growth after early spring rains, or the period shortly thereafter when there is nut growth. This allows park staff to limit the spraying of fungicides to these narrow time periods.

Because orchard trees are grown to produce a nut crop each year and do not follow the "boom and bust" cycle of their wild relatives, they are also very susceptible to the pecan nut casebearer, which seeks out orchard trees during bust years in the wild. Park staff use pheromone traps to monitor the number of casebearer moths, then target the spraying of an endotoxin to specific time periods. As part of the park's IPM program, staff have also developed a monitoring protocol for the pecan weevil, which feeds on mature nut crops<sup>1</sup>.

A groundwater monitoring protocol and routine surface water monitoring to detect runoff and leaching of pesticides are also extremely important aspects of the park's IPM program. In order to reduce their effect on the natural environment, the chemicals used on the orchard have been chosen because they are biodegradable, not biologically magnified, and not readily leached through the soil.

### **Orchard Thinning**

In 1999, park staff worked with county field agents and Texas A&M University to establish a thinning regime for the orchard. The orchard had become extremely

overcrowded, making it more susceptible to pecan scab, and the consensus was that every other tree should be removed. Before doing so, park staff worked with the state historic preservation officer and a landscape architect at the NPS Santa Fe Support Office for the Intermountain Region to carefully document the orchard in accordance with the National Historic Preservation Act. This record will allow any changes made to be reversed in the future if necessary.

One of the most difficult elements in the thinning process was to find someone willing to cut the trees, which were too small to be valuable for lumber. Eventually, park staff worked out a cooperative arrangement in which a logger agreed to do the cutting in exchange for the firewood, and park staff was responsible for the cleanup. The tree removal could potentially have created a public relations problem with visitors, but the park's interpretive staff became an important public relations tool. Interpreters were kept abreast of management decisions regarding the thinning process, and were able to explain the process and address visitors' concerns during interpretive bus tours that pass by the orchard.

Eventually trees that have been removed as a result of death or disease rather than the thinning program will need to be replaced. The park's internal management decision has been that maintaining the historic appearance of the landscape is more important than maintaining the historic genetic stock of individual trees. By planting more recently developed disease-resistant varieties, park staff believe that the reduction in pesticide use and its benefits to the environment will outweigh the loss of historic accuracy.

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<sup>i</sup> Harris, Marvin. "Taming the Wild Pecan at Lyndon B. Johnson National Historical Park." *Park Science* 19, no. 2 (December 1999): 1, 20-21.